Attachment F, 42914 ASU Tech Building AV Drawings.pdf

Auditorium Rack Details

CONSULTANT	Sheet Number	Sheet Title
Roland, Woolworth & Associates, LLC	EAV0.1	Title Sheet
356 CR 102	EAV1.0	Raceway Legends & Notes
Oxford, MS 38655	EAV1.1	1st Floor Raceway Plan
662.513.0665	EAV1.2	1st Floor Raceway RCP
http://www.rwaconsultants.net	EAV1.3	2nd Floor Raceway Plan
	EAV1.4	2nd Floor Raceway RCP
Consultants in Acoustics & Audio Video Technology	EAV1.5	Auditorium Raceway Plans
	AV2.1	1st Floor Device Plan
	AV2.2	1st Floor Device RCP
TECHNOLOGY OLASSBOOM BLILLDING	AV2.3	2nd Floor Device Plan
TECHNOLOGY CLASSROOM BUILDING Alcorn State University	AV2.4	2nd Floor Device RCP
Lorman, Mississippi	AV2.5	Auditorium Device Plans
Audio Visual Systems Integration	AV2.6	Auditorium Section
Addio Viodai Oyotomo mitogration	AV3.0	AV Signal Flow Legends
	AV3.1	Auditorium 129 Single Line Diagram
	AV3.2	Auditorium Lectern Single Line Diagram
	AV3.3	Large Classrooms 118,119 Single Line Diagram
	AV3.4	Small Classrooms 104,105,106,107 Single Line Diagram
	AV3.5	Computer Lab 108A Single Line Diagram
	AV3.6	Conference Rooms 239, 261A Single Line Diagram
	AV3.7	Misc Single Line Diagrams

AV4.1



Roland, Woolworth & Associates, LLC
Consultants in Acoustics & Audio Visual Technology

356 CR 102
Oxford MS 38655
662.513.0665

These drawings and their associated specifications, ideas, concepts, arrangements, designs and layouts are, and shall remain the property of the architect and consultant and no part thereof shall be copied, disclosed or distributed to any other party, or used in connection with any work or project other than the specific work as noted on these drawings without the express written permission of the consultant. Visual contact with these drawings or specifications or any other intellectual propery associated with the project shall constitute acceptance of this policy. © Roland, Woolworth & Associates, LLC.

EAVO.

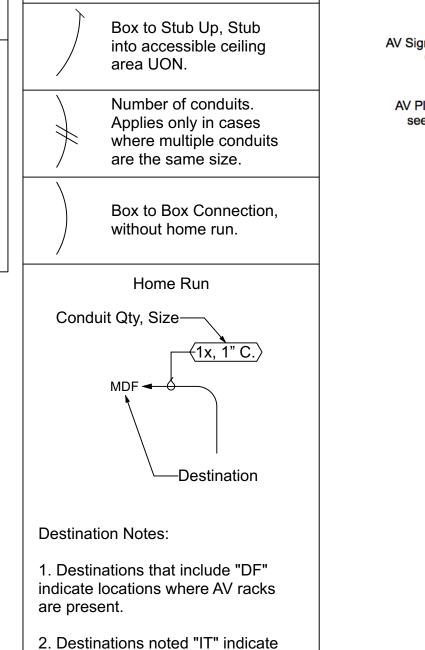
AV Bid Documents 23 Jan 2022

AV BACKBOX & POWER COORDINATION SCHEDULE

Attachment F, 42914 ASU Tech Building AV Drawings.pdf

	SX & LOWER GOOKBII							O		0 1	
Type	Вох	Mounting Height	Mounting Config	Supplied By	Installed By	Function	Note	Power Receptacle	Isolated Power	Estimated Load	Circuit Qt
AC	Hoffman ASE6x6x4	+16" AFF	Surface	Div 16/26	Div 16/26	AV Rack Power Feeder	See detail, coordinate with AV Contractor.	120VAC, 20A	Yes	2400W	4
AVK	Hoffman ASE6x6x4	+16" AFF	Flush	Div 16/26	Div 16/26	AV Equipment J-Box	Extend 1" conduit to IT closet (not shown on plans).	120VAC, 20A	Yes	240W	1
CM1	2 gang	+60" AFF, verify	Flush	Div 16/26	Div 16/26	Camera Plug Box		120VAC DUPLEX	NA	40W	1
CM2	2 gang	+10' AFF	Flush	Div 16/26	Div 16/26	Camera Plug Box		120VAC DUPLEX	NA	40W	1
CM3	2 gang	10'8" AFF	Flush	Div 16/26	Div 16/26	Camera Plug Box		120VAC DUPLEX	NA	40W	1
CU	1 gang	+48" AFF or Switch Height	Flush	Div 16/26	Div 16/26	AV Control		NA	NA	NA	NA
FB	Wiremold RFB4 Series	Floor	Flush	Div 16/26	Div 16/26	Combined AV & power floor box	Provide model CI-1 for on-grade, model SS for above grade locations.	120VAC, 20A Duplex	Yes	180W	1
IDF1	Hoffman ASE12x12x6	+16" AFF	Surface	Div 16/26	Div 16/26	Tie Line Panel		120VAC, 20A	Yes	1200W	2
IDF2	Hoffman ASE12x12x6	+16" AFF	Surface	Div 16/26	Div 16/26	Tie Line Panel		120VAC, 20A	Yes	1200W	2
J130	NEMA Type 1 24x24x6	Above accessible ceiing	Suspended	Div 16/26	Div 16/26	AV Pull Box		NA	NA	NA	NA
LS	2 gang	+11' AFF, Verify	Flush	Div 16/26	Div 16/26	Loudspeaker Plug Box		120VAC Duplex, 20A	Yes	1200W	1
MD	2 gang	+16" AFF (balcony floor)	Flush	Div 16/26	Div 16/26	AV Plug Box		120VAC DUPLEX	NA	180W	1
MDF	Hoffman ASE36X24X8NK	+8' AFF	Suspended	Div 16/26	Div 16/26	AV Pull Box	See detail	NA	NA	NA	NA
PJ1	2 gang	10'8" AFF	Flush	Div 16/26	Div 16/26	Projector Plug Box		120VAC, 20A	NA	1100W	1
PJ2	2 gang	Ceiling	Flush	Div 16/26	Div 16/26	Projector Plug Box		120VAC, 20A	NA	900W	1
PP	2 gang	+16" AFF	Flush	Div 16/26	Div 16/26	AV Plug Box		120VAC DUPLEX	NA	180W	1
TL	2 gang	+16" AFF	Flush	Div 16/26	Div 16/26	AV Plug Box		120VAC DUPLEX	NA	180W	1
VD	2 gang	+72" AFF, verify	Flush	Div 16/26	Div 16/26	Video Display Plug Box	Coordinate backing requirements with General Contractor, see architectural drawings.	120VAC DUPLEX	NA	180W	1

AV Systems Backbox Legend				
Symbol	Configuration			
TL	Wall, (Flush or Surface)	All field boxes are designated with a Type that corresponds to the AV Systems Integration drawings.		
FP	Flush Floor			
FP	Flush Ceiling	Type Designator——→⊤L		
IDF	Suspended or Pedestal			

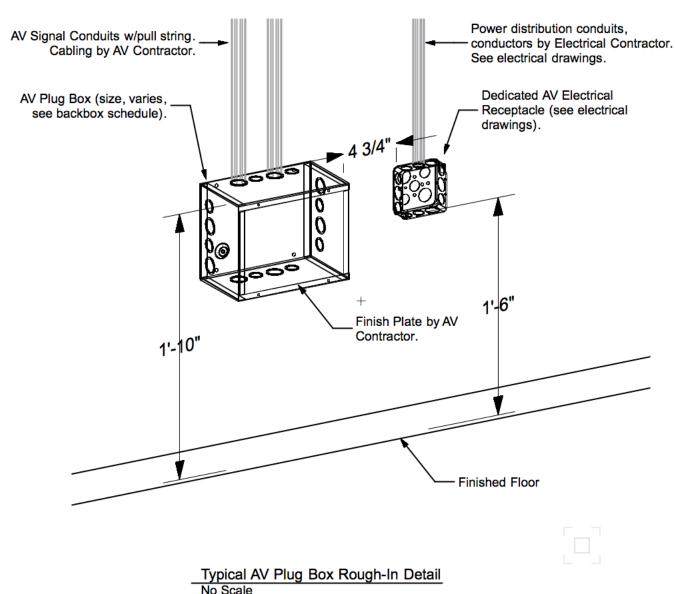


the closest IT closet or COMM room.

verify the end point with the owner.

In this case, the contractor shall

Conduit Label Conventions



RACEWAY & POWER DISTRIBUTION NOTES

GENERAL

- 1. All work on this sheet is part of Div 16, UON.
- 2. Architectural details shown on this sheet are for reference only. Refer to the architectural drawings for construction details.
- 3. The AV contractor shall coordinate all work with the General Contractor and/or Electrical Contractor as applicable.
- 4. Verify site conditions for all work. Inspect rough-in progress for all AV raceway systems.
- 5. Note that the project is under construction and most areas are at the final stages of completion. 6. The AV Contractor may be required to mount devices in finished, or near finished ceilings.
- 7. Coordinate all work with the General Contractor and provide all required mounting systems required. 8. All exposed hardware, mounts, grilles, etc. shall be painted as directed by the architect.

CONDUIT

- 1. All conduit indicated on risers or plans is 1.0" U.O.N.
- 2. All conduit shall be ferrous metal construction/EMT see Division 26. 3. All conduit, pull boxes, junction boxes and backboxes shall be installed under Division 26.
- 4. Conduits located in floor rigid galvanized type, UON, see Division 26.
- 5. Conduits shall be electrically isolated from AV equipment racks. 6. Isolate service entrance to racks with nylon or plastic bushings, coordinate with AV contractor.
- 7. Do not combine AV conduits with power distribution systems. 8. Do not consolidate or combine AV cabling or conduits. Separate raceways are required for each circuit level as shown.
- 9. Install a single continuous pull string in each conduit.
- 10. Pull boxes shall be installed after each 270 degree bend. Pull boxes are not indicated on the plans.
- 11. PVC or plastic conduit is prohibited unless previously authorized by the AV Consultant. 12. Refer to architectural and/or electrical drawings for additional conduit installation requirements.

BACKBOXES

- 1. All backbox locations shall be closely coordinated with AV prior to installation.
- 2. Backbox locations as shown on the plans are conceptual. Actual locations shall be closely coordinated with AV (Div 11) prior to installation.
- 3. Backbox locations as shown on the plans reflect recommended locations, verify all locations prior to rough-in.
- 4. Contractor shall verify all backbox locations with the Electrical Engineer or AV Consultant prior to installation. 5. Coordinate box locations with architect to avoid conflicts with architectural features.
- 6. If conflicts exist between conduit systems, contact the Electrical Engineer.
- 7. If conflicts exist between conduit systems, contact the AV Consultant. 8. NEMA backboxes designated for future use shall be installed with a blank oversized cover plate.
- 9. The Electrical Contractor shall verify and coordinate all AV backbox locations with the architect or AV Consultant prior to installation.
- 10. For all AV Box locations, provide a separate power receptacle as noted. Locate the power box directly
- adjacent to AV backboxes U.O.N. Allow for standard clearance per NEC. 11. Refer to AV systems integration details for more information on backbox installation.
- 12. Boxes noted as "4S" are standard EO style, 4" Square Box, Welded, Metallic3.5" Deep (min., UON).
- 13. Provide trim rings as noted for standard gang plates.
- 14. Gang boxes are EO style, Size as noted. Provide welded, metallic type, 3.5" deep, UON.

- 1. All wireways and cable trays shall be supplied and installed under Division 26, if applicable.
- 2. All wireways shall be covered. 3. Cable trays and wireways shall include separate, isolated paths for signal cabling.
- 4. Coordinate actual wireway/tray paths with Electrical Engineer and AV Consultant. 5. Do not combine AV cabling circuits with power distribution conduits.
- 6. Refer to architectural drawings for additional information on tray routing and installation details.
- 7. Refer to AV equipment rack drawings for details on AV cabling and rack service entrance.

CABLE TRAYS

- 1. Cable trays are shown for reference only, refer to the Electrical Drawings.
- 2. AV conduits stub into cable trays as shown, ensure that conduit stub is terminated within 4" of top edge of tray. 3. AV cnduit stubs should terminate less than 4" from outside edge of tray.

OWNER-FURNISHED SYSTEMS

- 1. Conduit requirements for systems by others are shown for this work only where specific integration is required.
- 2. Coordinate installation of conduit systems with those of owner-specified systems or systems by others.
- 3. Cooridnate and verify presence of Telco, Data, LAN, CATV, SATV service entrances. 3. MDF/IDF locations include space for owner-furnished and future equipment.

POWER DISTRIBUTION

- 1. All power systems should be provided as noted in Division 16/26 and the related electrical system drawings.
- 2. All receptacles 20A, U.O.N.
- 3. Do not combine AV conduits with power distribution systems.
- 4. Mount all power receptacles as shown on the plans, U.O.N.
- 5. Mounting height for AV receptacles are the same as the adjacent AV box, see backbox legend. 6. Receptacles shown or noted on AV drawings should be distributed from a transformer-isolated power transformer, U.O.N.
- 7. The AV power distribution transformer and service panel should be designated exclusively for AV use. 8. The AV power distribution transformer and service panel should be free from dimmable loads, motors and other noise-inducing circuits.
- 9. AV power noted on these sheets is for reference only. Refer to electrical power drawings for requirements.
- 10. All power systems should be sourced from separate transformer-isolated sub-panels. 11. The schedule includes a field for power circuiting.
- 12. Locations of the same designator may share a single circuit within the same room or location where permitted by loads. 13. Provide a single circuit where noted as "dedicated".

NOTES TO AV CONTRACTOR:

- 1. All work shown on EAV sheets is part of Div 26 (Electrical) and is shown for reference only.
- 2. Raceway and power shown on EAV sheets reflects design and are not "as built". AV Contractor shall verify and coordinate all AV raceway,
- power and data drops from field inspection and/or coordination with the owner.
- 3. Refer to plans for device locations, quantities and cabling routes.
- 4. Refer to architectural and electrical drawings for reference.
- 5. Final AV design includes devices that do not have backbox or raceway. AV Contractor shall direct cable and use raceway to accommodate all
- 6. Final AV design does not use all backbox locations shown on EAV sheets. Provide and install black cover plates, coordinate color with
- architect, UON.



Roland, Woolworth & Associates, LLC Consultants in Acoustics & Audio Visual Technology 356 CR 102

Oxford MS 38655

www.rwaconsultants.net

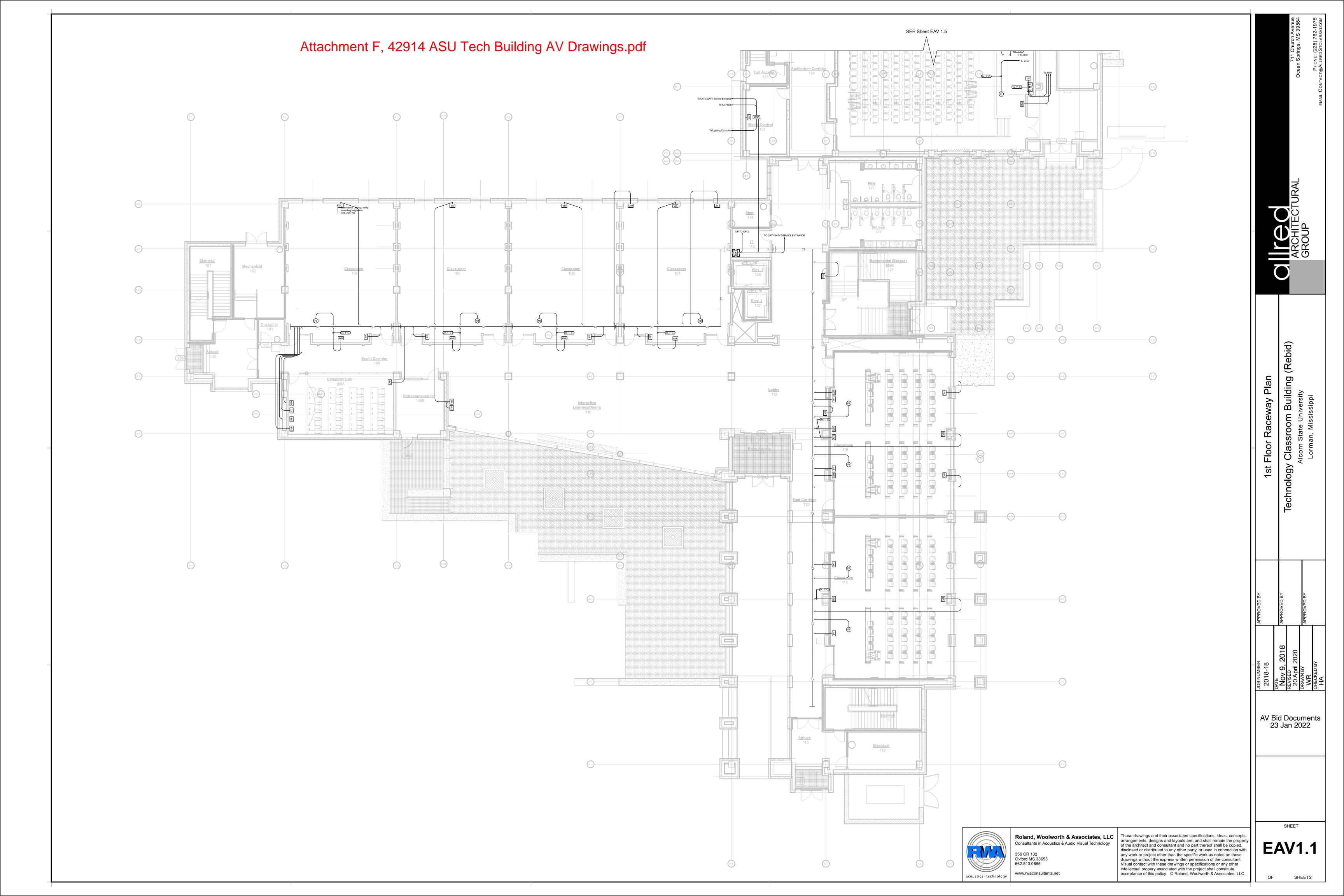
arrangements, designs and layouts are, and shall remain the property of the architect and consultant and no part thereof shall be copied. disclosed or distributed to any other party, or used in connection with any work or project other than the specific work as noted on these drawings without the express written permission of the consultant. Visual contact with these drawings or specifications or any other intellectual propery associated with the project shall constitute acceptance of this policy. © Roland, Woolworth & Associates, LLC

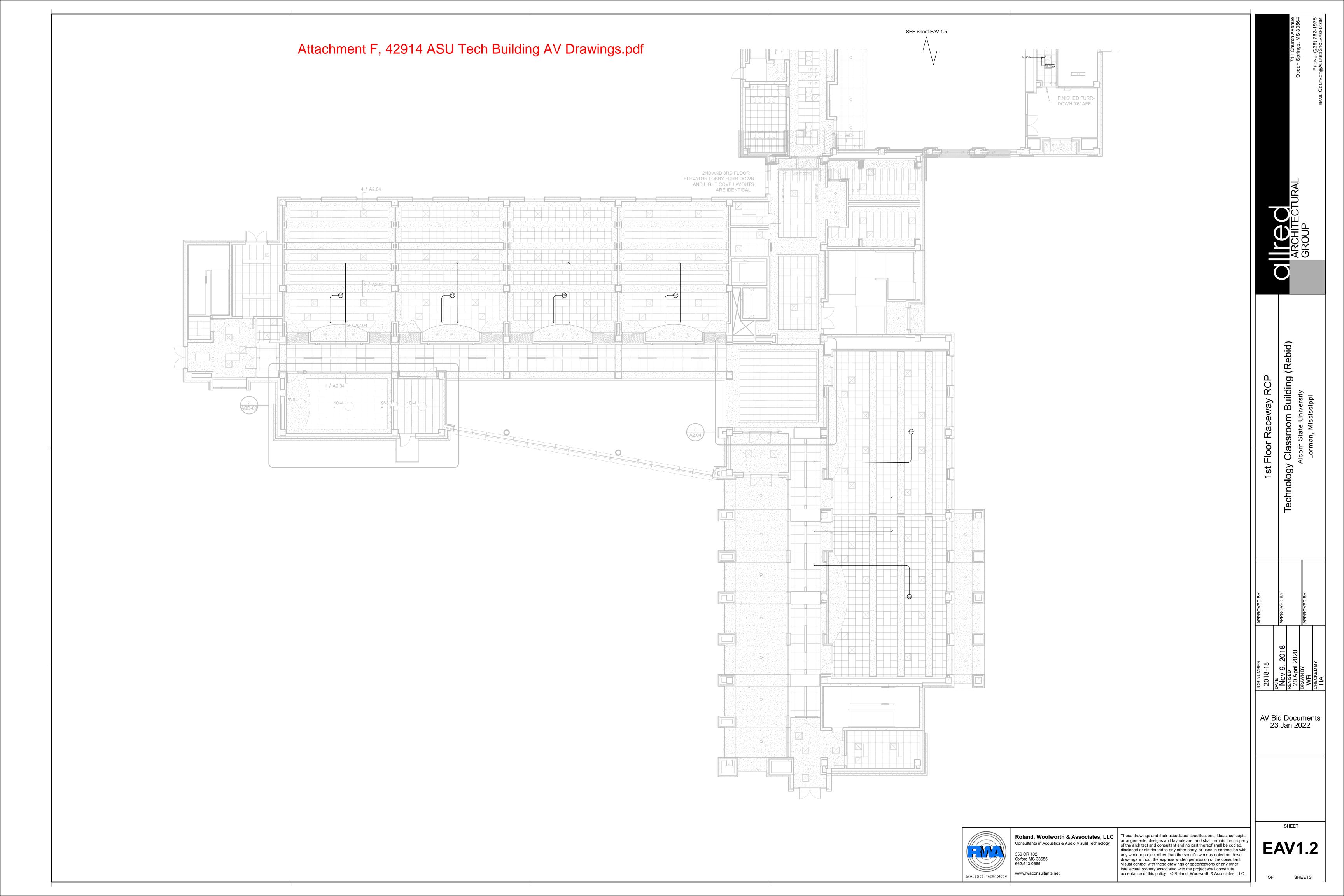
These drawings and their associated specifications, ideas, concepts,

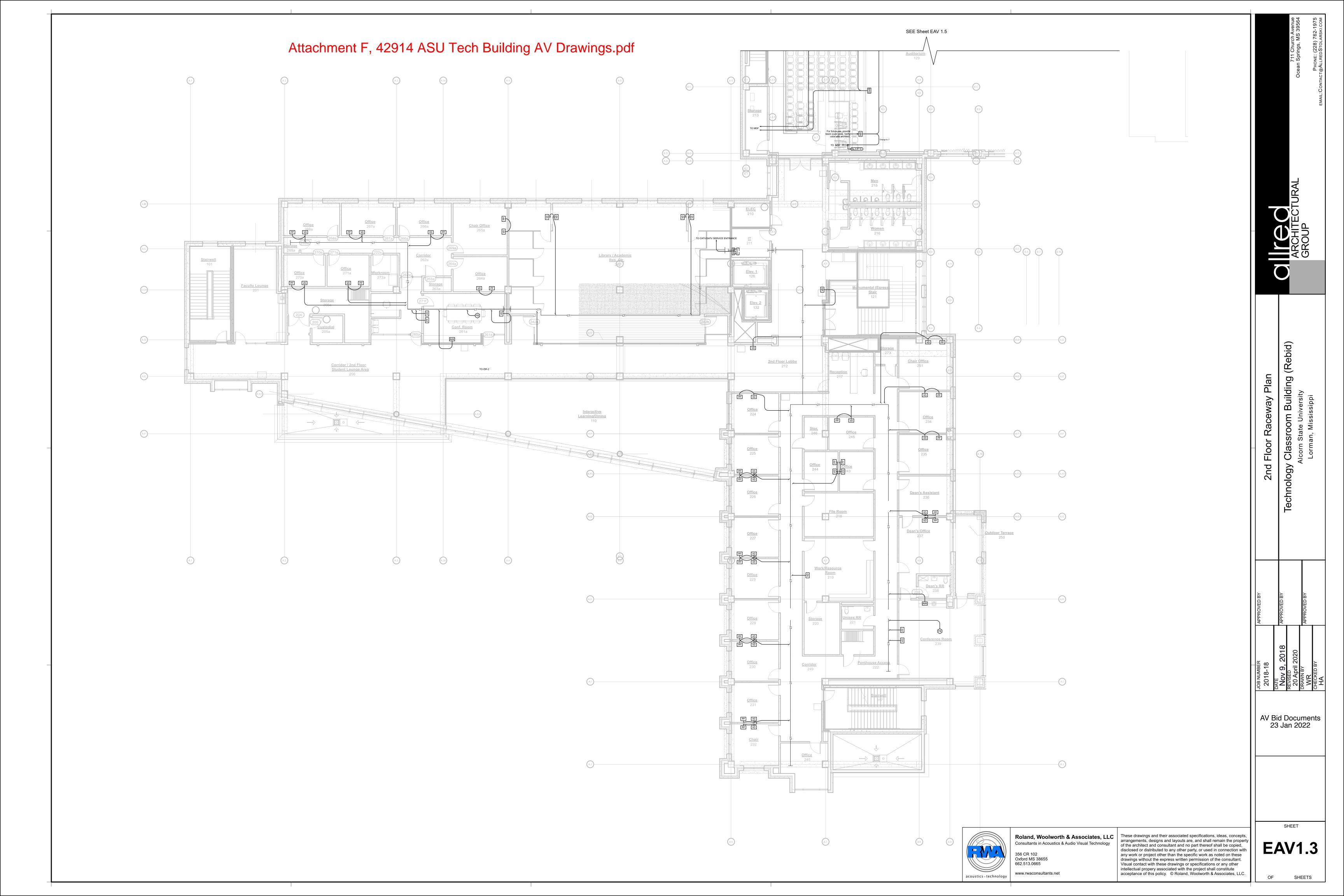
SHEETS

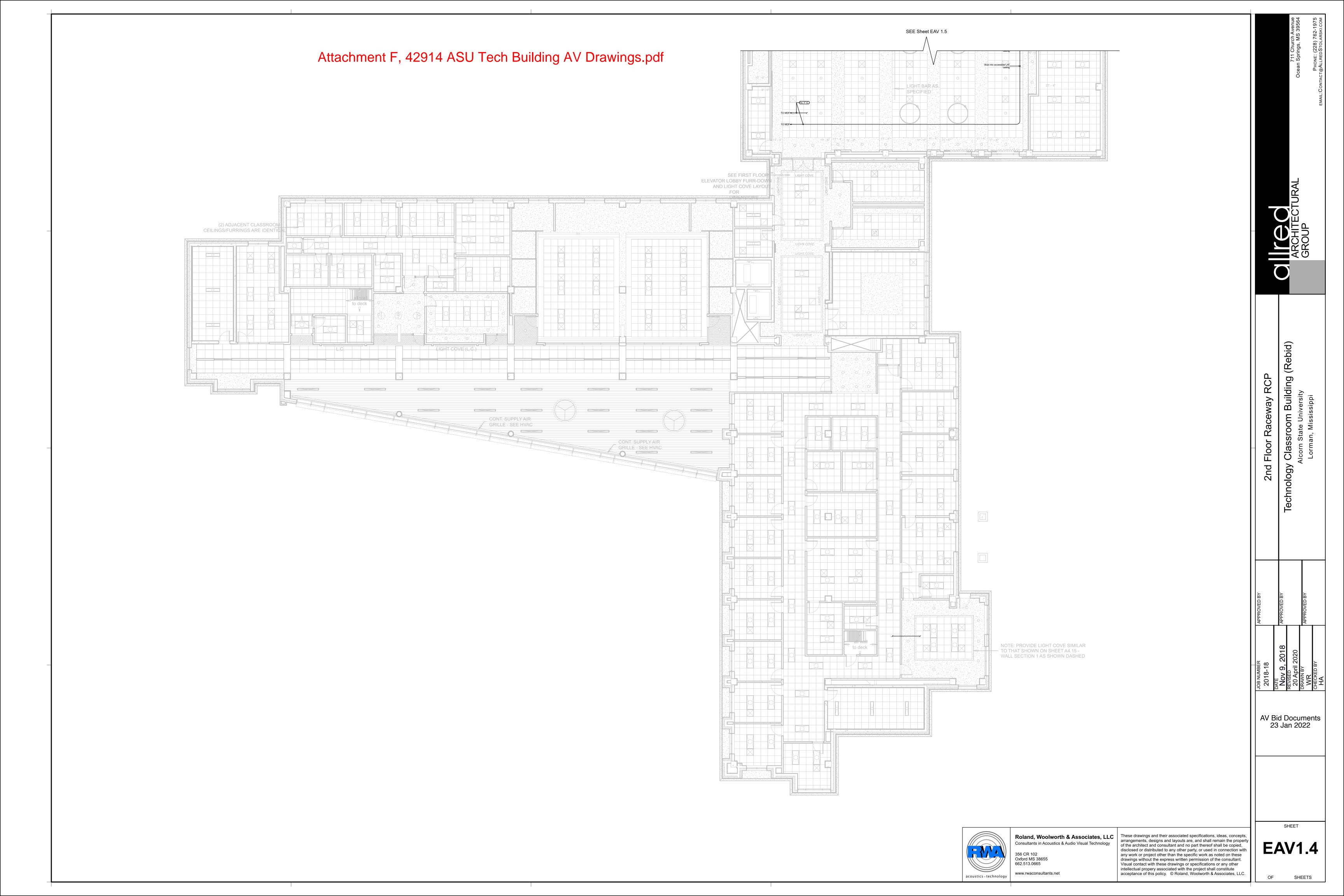
AV Bid Documents 23 Jan 2022

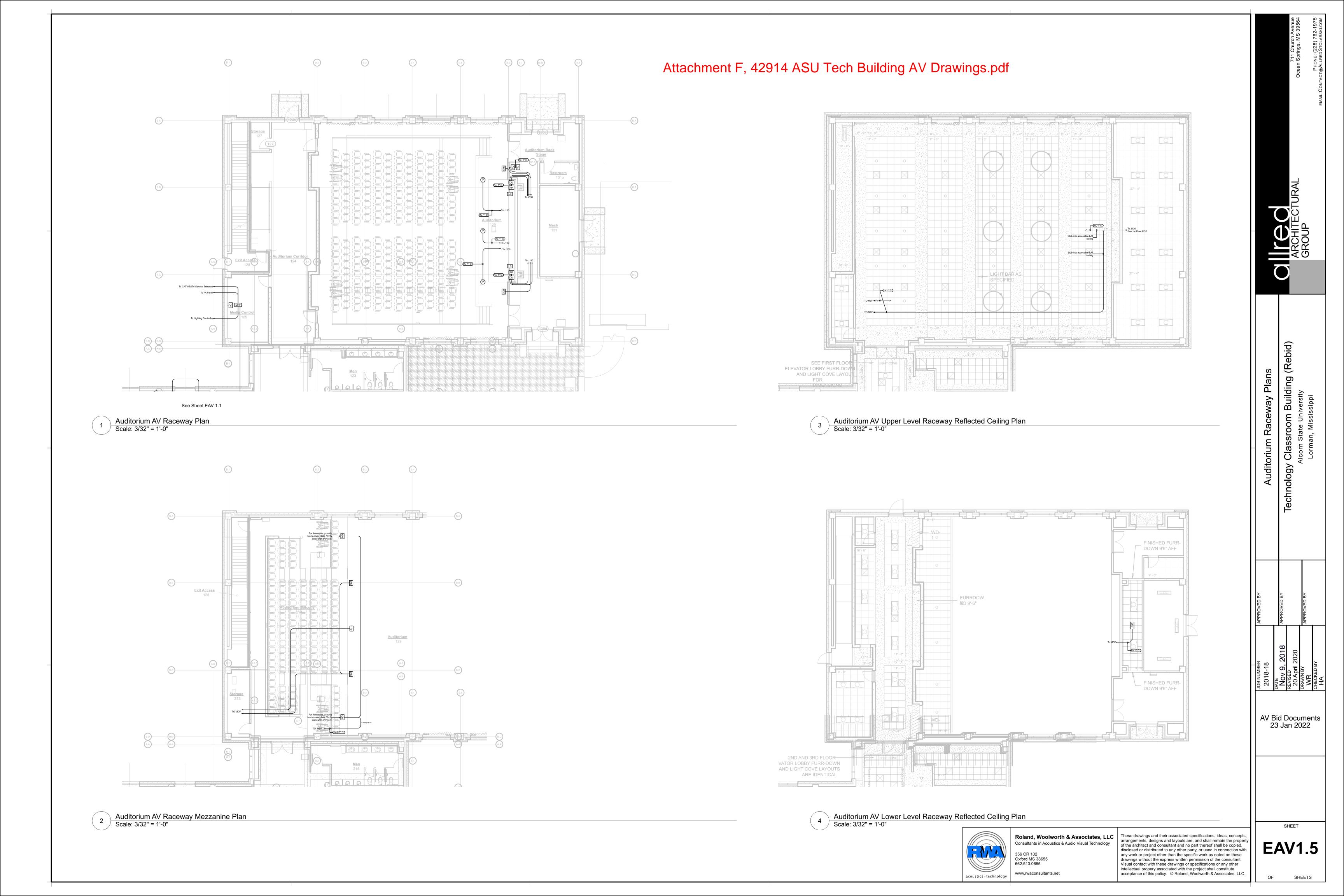
SHEET

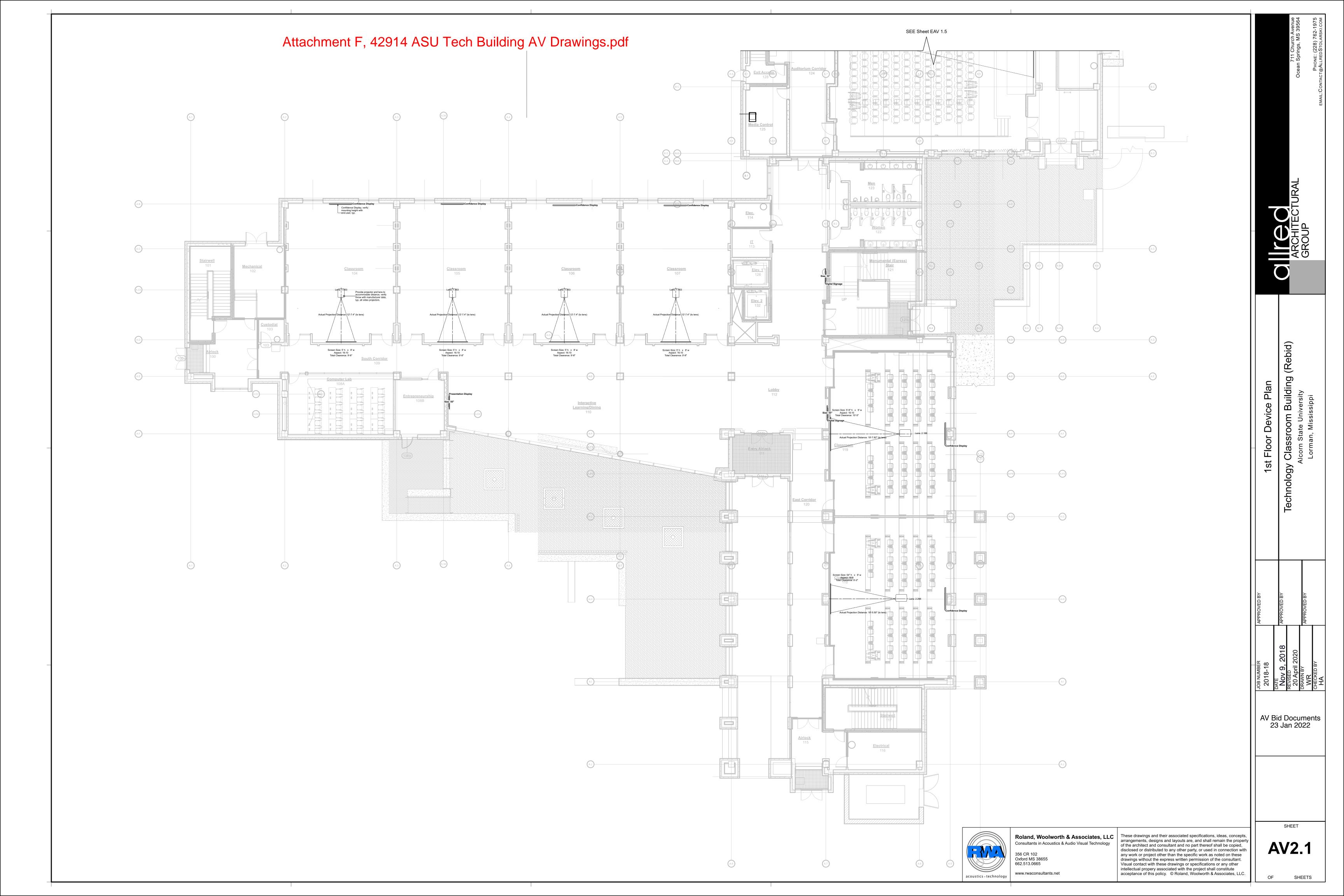


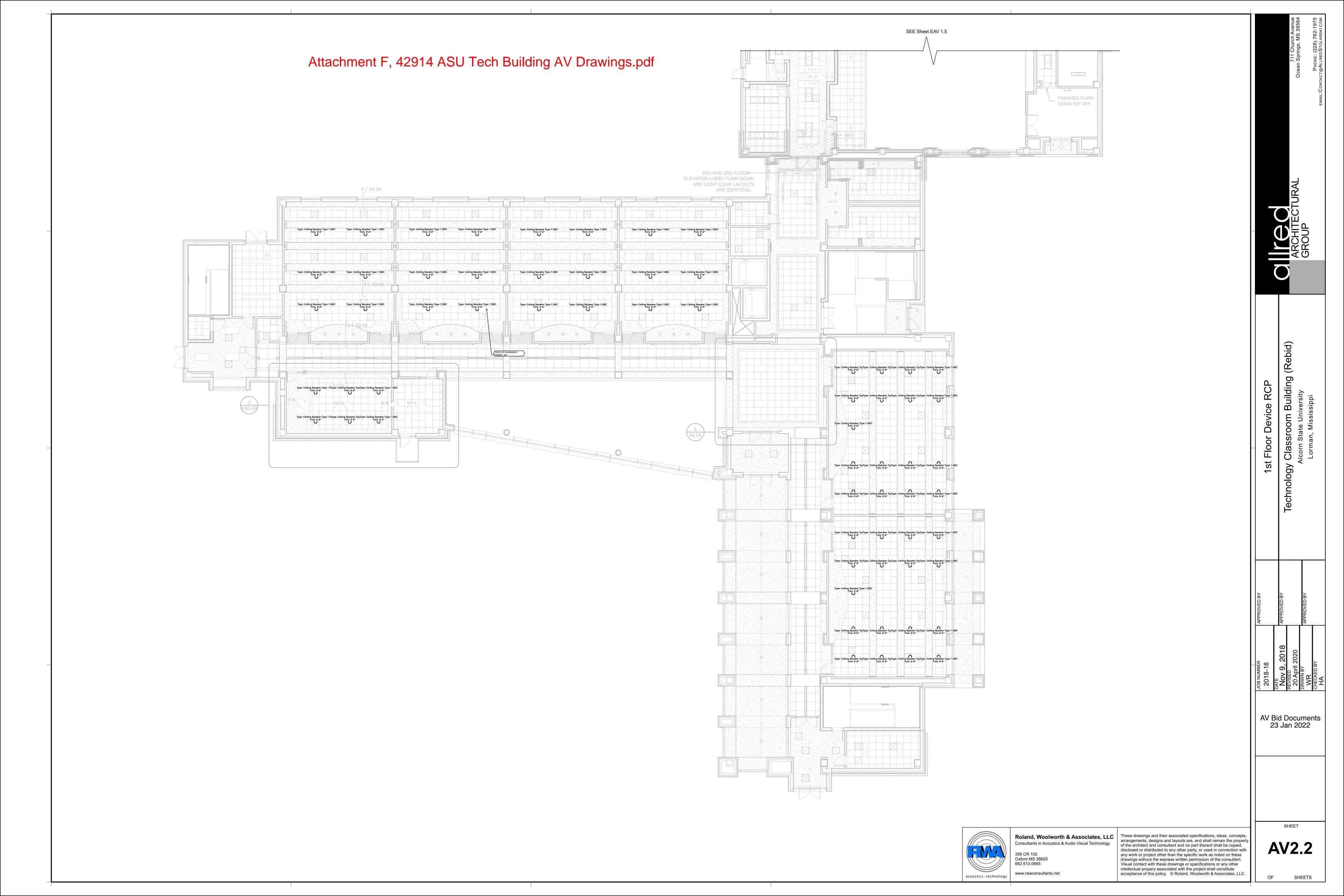


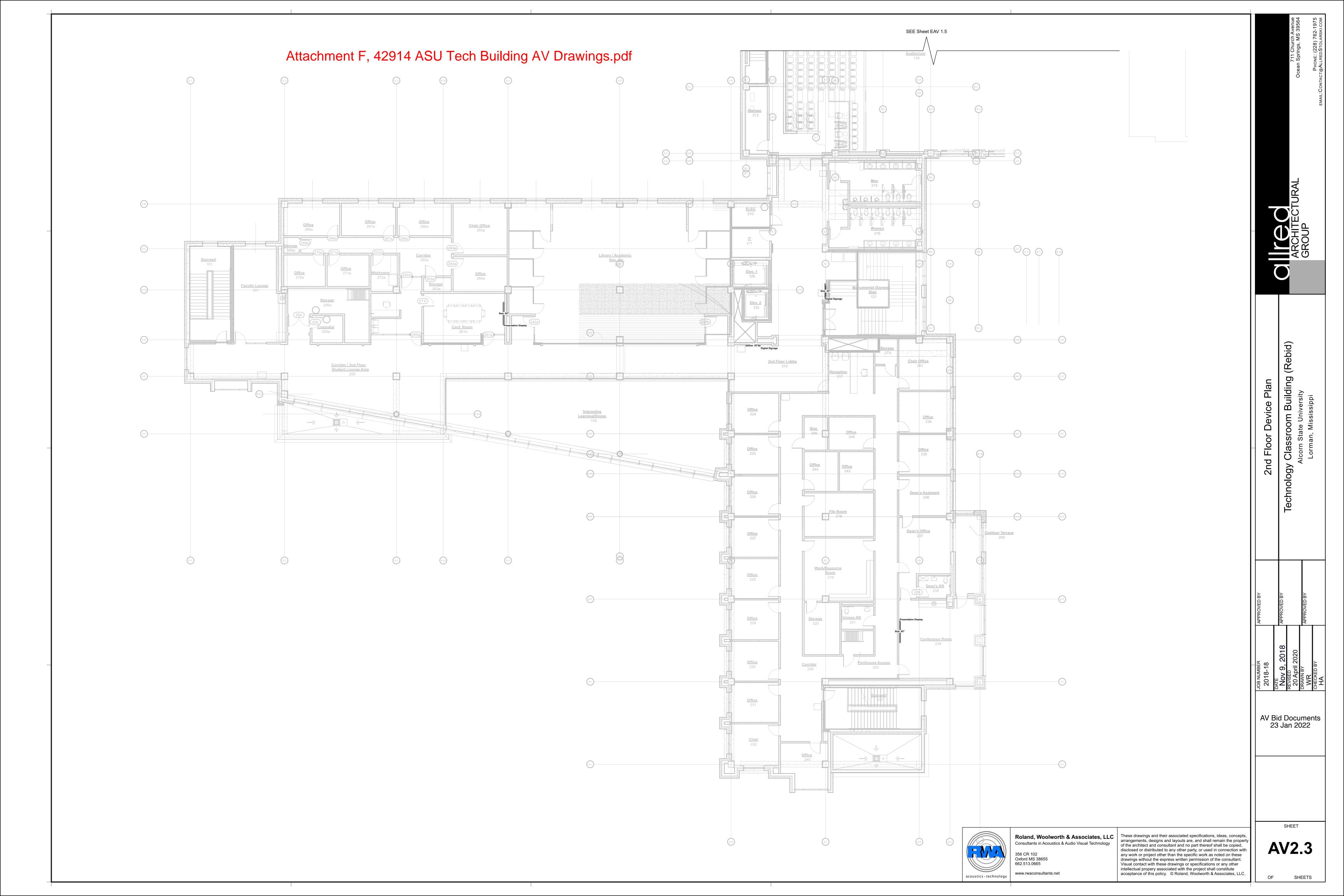


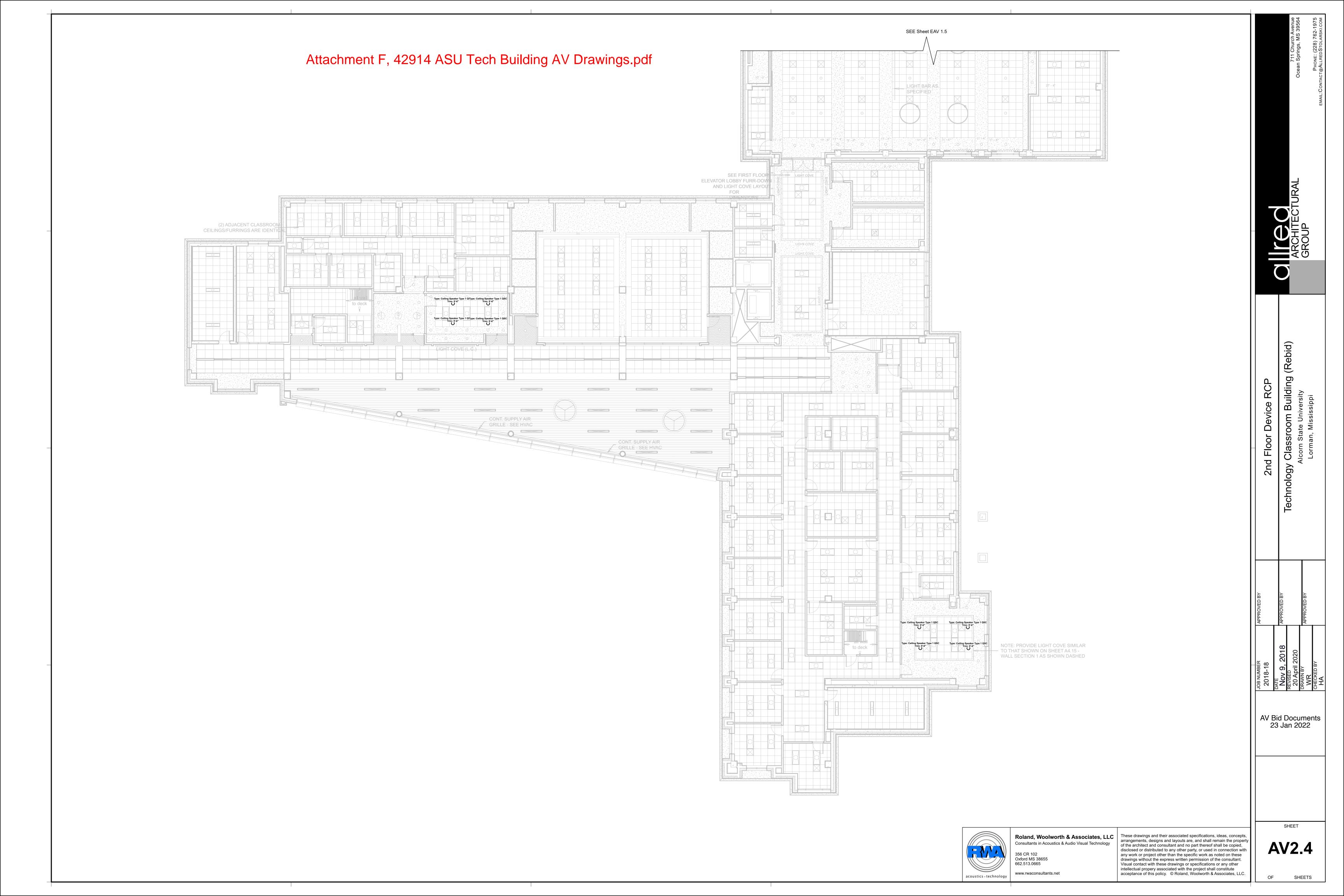


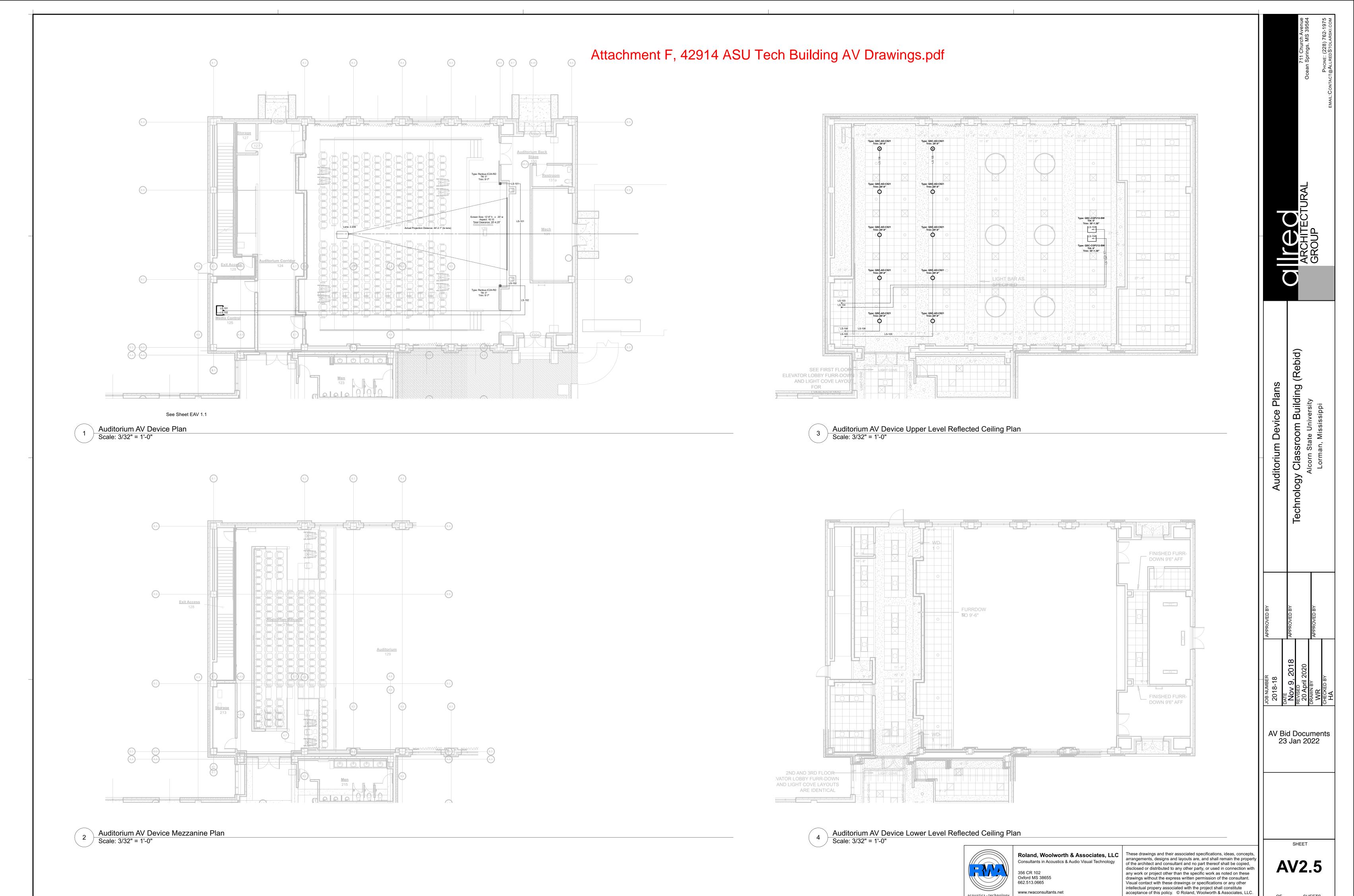




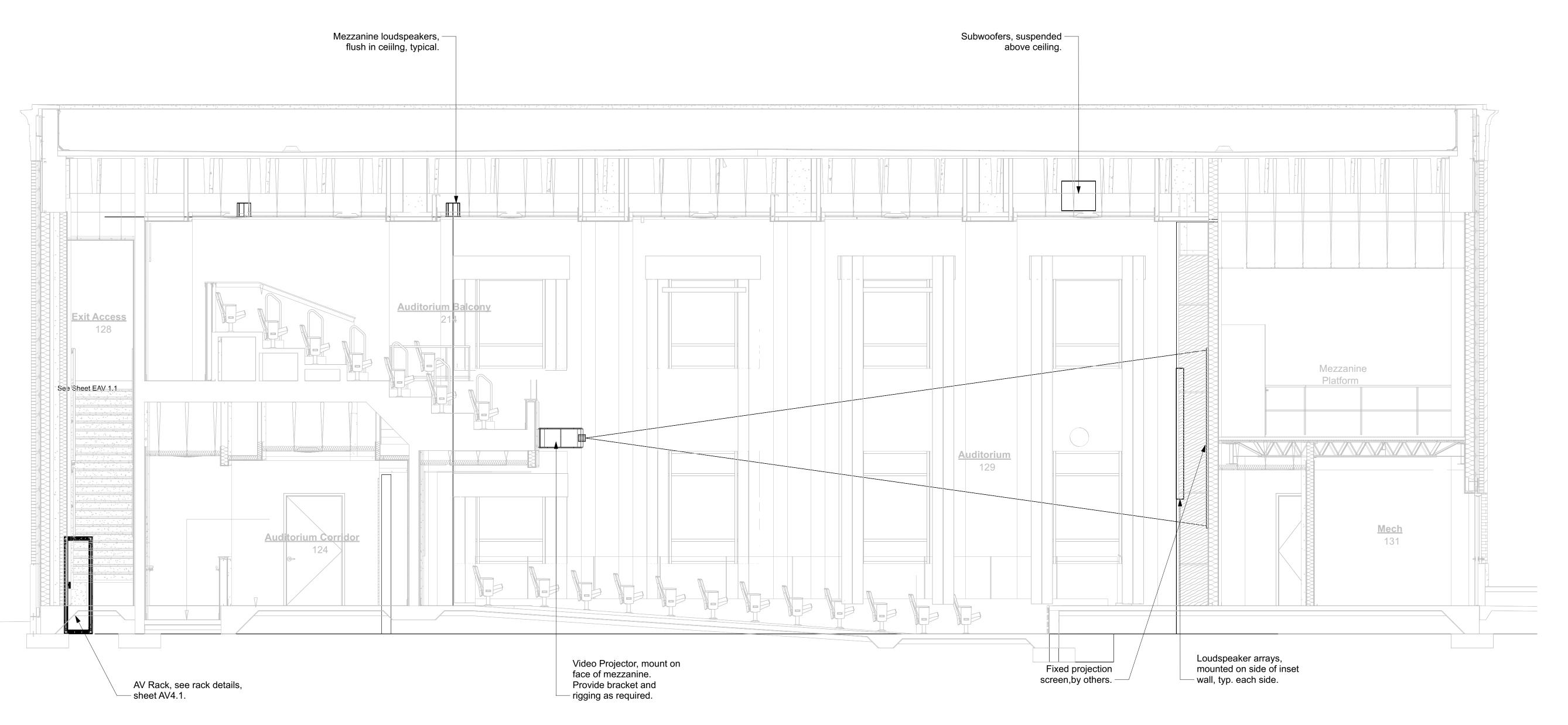








Attachment F, 42914 ASU Tech Building AV Drawings.pdf



Auditorium Section
Scale: 1/4" = 1'-0"



Roland, Woolworth & Associates, LLC Consultants in Acoustics & Audio Visual Technology 356 CR 102 Oxford MS 38655 662.513.0665

These drawings and their associated specifications, ideas, concepts, arrangements, designs and layouts are, and shall remain the property of the architect and consultant and no part thereof shall be copied, disclosed or distributed to any other party, or used in connection with any work or project other than the specific work as noted on these drawings without the express written permission of the consultant. Visual contact with these drawings or specifications or any other intellectual propery associated with the project shall constitute acceptance of this policy. © Roland, Woolworth & Associates, LLC.

AV Bid Documents 23 Jan 2022

CABLE & WIRE REFERENCE TYPE DESIGNATOR FUNCTION BASIS OF DESIGN West Penn 452 OK for racks, conduit only. Do not expose. Audio, Low Level Audio, High Level West Penn 227 Audio, High Level THHN, #10-#12 AWG >1000W Audio Power RMS or as recommended by equipment manufacturer. COM, 232, SERIAL Nest Penn 452 OK for racks, conduit only. Do not expose. West Penn 4246AF Ethernet and similar networks, >50, <100 meters JTP, Proprietary AV Transport, as recommended by Extron JTP, Proprietary AV Transport, as recommended by Crestron s recommended by the manufacturer of connected endpoints. AES3 (EBU) Il uses within the limits of the AES specification AES50 Audio West Penn 4246AF All uses within the limits of the AES specification n racks, risers, conduit installation, 250' max Belden 1505A In racks, risers, conduit installation, 300' max onduit installation, 400' max West Penn 3CRGB OK for racks, conduit only, do not expose NTSC Video Nest Penn 819 OK for racks, conduit only, do not expose OK for racks, conduit only, do not expose, use similar for 2-channel systems Production Com West Penn 452

OK for racks, conduit only, do not expose.

ABBREVIATIONS

Antenna or Antenna Connection Point

Alternating Current (Power Distribution

Constant Voltage Attenuator Rack Panel

Amplitude Modulation (AM Radio)

Constant Voltage Attenuator

Cathode Ray Tube Display

Control Unit, Control Panels

Direct Current (Circuit Designator

Digital Video or Versatile Disc Player

Frequency Modulation (FM Radio)

General Purpose Input/Outpu

Intermediate Distribution Frame

Input/Output Interface

Junction or Junction Box

Microphone Level (<-20dBm)

Master Distribution Frame

Owner Furnished Equipment Power Amplifier

Mic, Line on Rack Panel

Mic, Line, Speaker

Normally Open

Pan/Tilt/Zoom

Power Supply

Receiver

Audio Mixer

Thunderbolt

Touch Panel

Volume Control

Transmitter

Crossover

Impedence

Record or recorder

Rack Mounted device

Loudspeaker, Speaker

Unless Otherwise Noted

Visual or Video Display

Radio Frequency

MOD MON

Master Control Server/Controller

Normally Closed or No Connection

Computer (Mac, Windows, Linux)

Line Level (+4dBm)

Local Area Network Liquid Crystal Display

Above Finished Floor

Audio Input Card

Assited Listening

Audio Output Card

Breakout Box

Center Line

Audio Video Interface

Distribution Amplifier

DSP Signal Processor

Foldback, Floor Box

Format Converter

Flat Panel Display

Data Terminal

Fire Alarm

Filter Set

RACK & DISTRIBUTION FRAME NOTES

Coordinate all power distribution landings with Division 16/26. 3. Dimensions are conceptual, actual dimensions are dependant on rack manufacturer and requirements,

4. Do not install front doors UON. 5. Do not use rack base for signal cabling, for power distribution only. . Ensure that all requipment is accommodated, see signal flow drawings. Equipment not suitable for rack mounting or equipment may not be shown on rack elevations.

. Mount non-EIA equipment on rear rack rails or DIN rail. Submit details. 9. Isolate raceway and power distribution systems from A/V conductors and racks. Ground conductor shall be isolated from all mechanical systems. 11. Mount all devices securely. Back of rack devices shall be securely mounted to rack panels, DIN rail or 12. Provide blanks or vents in all spaces. Do not allow open spaces

13. Provide casters as recommended by the manufacturer for all portable and ATA style racks. UON 14. Provide conduit stubs and fittings OR open rack space on top of racks for cable access. 15. Provide exhaust fan for each rack/bay as required by the heat load, coordinate with consultant. 16. Provide full height EIA rails for front and rear. 17. Provide incandescent work light in all racks. 18. Provide passive and switched 120VAC power distribution for all rack bays.

19. Provide passive power circuits for DSP, control and source equipment and switched circuits for each 20. Provide end-user controls at rack location and the primary control location, coordinate with AV

21. Provide solid rear doors with vents. 22. Rack details applicable for all locations 23. Rack illustrations shown throughout these drawings do not represent specific manufacturers. 24. Rack layouts are suggested.

25. Provide rack space to accommodate all equipment, regardless of elevations. 26. Submit details for all rack layouts prior to construction 27. See details for cabling and power configurations.

29. Separate cable bundles by signal type as much as possible. 30 Use only black 6-32 Phillips head screws for all rack mounts. 31. Use only black racks, black anodized vents, blanks and accessories, UON.

PANEL & PLATE NOTES

1. All exterior panel mounts shall be rivets or tamper proof screws UON, submit detail. 2. All panels shall be brushed, black anodized 1/8" aluminum UON. 3. All text shall be at least 1/8" high bold characters. Engrave and fill in white ink. Bevel all panel edges by 1/16".

Connector borders shall be engraved 1/8" thick, filled in white ink 6. Connector compliment is typical, see single line drawings and specifations for details, submit for 7. Each character shall have a unique number corresponding to the conductor number, see single lines. 8. Panel elevations are conceptual, refer to single line drawings for connection requirements.

9. Submit shop drawings for all panels. 10. Coordinate field panel installation with electrical contractor 11. Isolate panel metal from backboxes where necessary. 2. Verify backboxes with electrical drawings and/or AV Raceway drawings for all panel locations.

13. Verify field conditions for all panel locations, adjust panel sizes or finish configuration as required. Verify that all conduit is isolated from backbox metal. 15. Do not couple signal ground to raceway system UON. 16. Where panels include 120VAC, coordinate with electrical contractor

17. Do not install high voltage circuits, coordinate with electrical contractor. 18. All BNC connectors shall be as shown, isolated from chassis metal or Neutrik D Series UON. 19. All connectors shall be as shown UON. 20. All high-level audio connectors shall be Neutrik NL Type UON.

21. All RCA type connectors shall be Neutrik NF type.22. All UTP data connectors shall be equal to CAT6 compliant, Neutrik etherCON Series UON. 23. All XLR type connectors shall be Neutrik DLX Series, solder cup type. 24. Match connector finish with panel color, verify all colors UON.

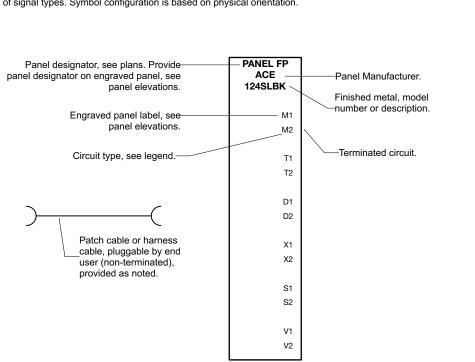
25. Provide optical connectors as shown, equal to Neutrik opticalCON Serieis. 26. Verify circuiting requirements for all optical connectors with connected manufacturer's recommendation.

Field and/or Terminal panels shall be configured to provide circuit access to the end-user at the finish side of the panel metal. The interior shall be terminated per the standards noted in the specification, or as recommended by

Panel Legend applies to field panels, rack panels and custom millwork panels.

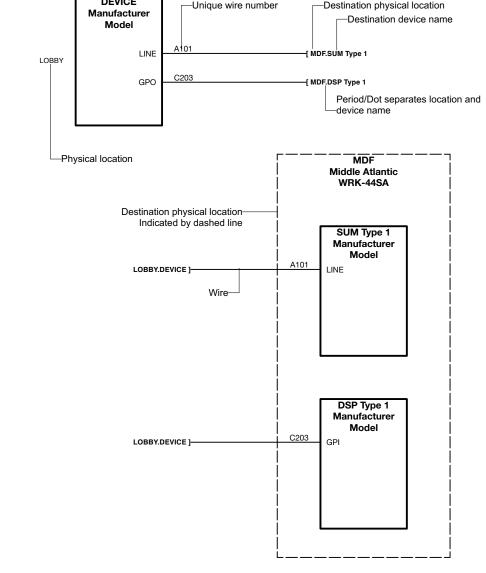
Provide connector types typical for circuit (see wire & cable schedule) and/or the terminated end point. Note that panel elevations may not always be provided. The single line takes precedence over any panel elevation for connector types, quantities, terminations and circuiting. Contractor shall submit shop drawings for all custom

Signal flow/direction is not literal, the symbol indicates a panel at source location or destination location, regardless of signal types. Symbol configuration is based on physical orientation.



SINGLE FLOW & COMPONENT TERMINATION CONVENTIONS (fixed) circuit. MIXER COMPANY MIXER MODEL MIC/LINE 2 MIC/LINE 3 /IC/LINE 4 MIC/LINE 5 Patch cable or MIC/LINE 6 harness cable, verify lenght with MIC/LINE 7 —owner, UON. —Output Circuits Input Circuits-Panel Label— Note that connections for field devices are shown "in context". Connections and terminations for some devices may not be shown. Verify correct terminations with the manufacturer in all cases

Terminated circuits are shown as lines, "terminated" to "sockets", attached to Device blocks. To simplify wiring in complex systems, wiring "tags" are used to "break" wires between two points.



Note that in some cases, physical locations are shown on the plans and NOT on the single lines. This is usually the case where the device location is often repeated, such as a flat panel display or a connection plate that is used in multiple location. In this case, the location as shown on the plan is referred to a detail which includes applicable direction for that location. The corresponding connection is also included as shown above.

AUDIO JACK FIELD CONVENTION Jack Fields are shown on the single line as shown. Refer to connected circuits for signal type. Provide jack fields equal to the following products, UON. Audio, Low Level: Bittree 489-A SeriesA Audio, High Level: Custom by Contractor, see detail POINTS ONLY > Video, NTSC, HD-SDI: Bittree 12G+ Series Data, Copper: Rack Type, Punch, CAT6 certified (no keystones). Data, Optical: Coupling Type, LC or ST, Rack Type.

Refer to termination and grounding detail. Configure terminations and grounding accordingly or as

Configure isolated or bussed grounds as required by the frame configuration, circuit type, circuit mix, etc. IE: Isolate grounds from frames when frames share circuit types (M/L, Production Interfom, etc.). Include details on all shop drawings and as-built drawings, see specifications.

Attachment F, 42914 ASU Tech Building AV Drawings.pdf

All network switches indicated by the AV single line drawings shall be provided by the AV Contractor as stand-alone networks, fully independent of all site LAN, UON Network switches chassis/frame units may not shown on the single line drawings. Indication of a terminated LAN port indicates a switch is required at each physical location (MDF, FOH, IDF, etc.)

Provide and configure switches as recommended by the manufacturer of the connected systems. Include switch configuration in submittals. All switches shall be gigabit type (10/100/1000) and shall support AES67, and shall be compliant with the requirements of the connected equipment's manufacturer's recommendations Provide port quantity as shown on the single lines for terminated ports.

Interface AV switches to site LAN via "tie line" port if shown on the single line drawings. In this case, coordinate with the owner's IT staff for filtering DHCP configuration, administrative access and and internet access. In cases where AV switches are connected to the site LAN, the AV Contractor shall enable security features required by the owner. Access to the primary site network shall be limited to internet access, administration, control UI access and service access. Do not stream content to primary site network unless specifically noted on the drawings and/or specification. Network switch requirements are indicated by the port type and/or logical network, dictated by the connected client equipment. Networks may not represented on the single line drawings unless specific configurations are required.

Indication of a terminated LAN port to a client device indicates that a switch is required at each physical location

Provide and configure switches as recommended by the manufacturer of the connected systems. Include switch configuration in submittals. All switches shall be gigabit type (10/100/1000), and shall provide the following minimum

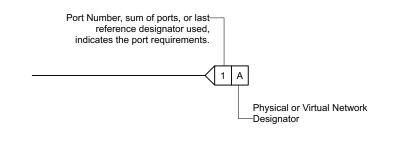
AES67 Supportshall support AES67, and shall be compliant with the requirements of the connected equipment's The ability to disable EEE / Green Ethernet. Full IGMP support.

IGMP query support, enable on one switch per network, UON (recommended query interval is 30 seconds).

Provide port quantity as shown on the single lines for terminated ports or as recommended by the manufacturer of the connected equipment. Configure a single physical switch with vLAN segements as shown on the single line drawings and prepare Port Schedules for as-built drawings (see specification). Each network segment shall be configured as a separate (virtual o

physical) network with a separate physical switch OR vLAN segments. Standard network types are shown below: Network ID (Typical, Subject to Change): A: (Network Segment) AV Controls, administration and configuration Q: (Network Segment) IP Audio (AES67, Q-Lan, AVB, Dante)

I: (Network Segment) Other Proprietary/Non-IP Distribution Systems L: (Port "tie-line") Interface to site LAN.

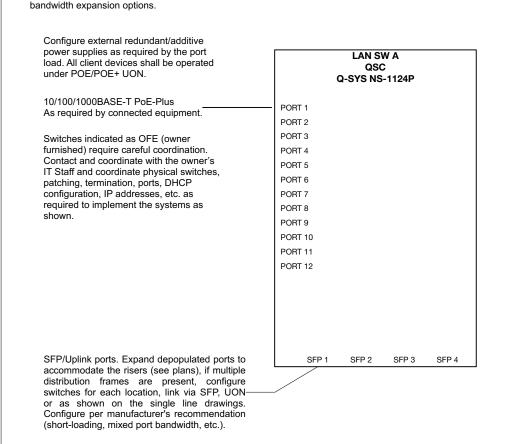


Port Schedule example. AV Contractor shall provide schedules for each physical system, see single line

Physical network, refers to a rack location. Basis of Design switch, indicated for reference only. AV Contractor is responsible for providing switches per the notes in this section (see above).					
NETWORK: AES67 Audio, Control NETWORK ID: Q					
SWITCH: QSC Q-SYS NS-1124P					
PORT	FUNCTION	CLIENT DEVICE	NOTES		
1	DSP Transport	QSC 100F	Configure for redundant operation.		
2	Field Panel	AtteroTech unDX2IO+			
3	Audio Amplifier	CX-Q 2K4			
4					
5					

Provide switches and/or routers as required by the manufacturers of the connected equipment. Manufacturer's recommendations shall take precedence in all cases. All switches shall be compliant with the requirements of the connected equipment's manufacturer's

Basis of Design switch configurations, if shown on the single line drawings, are for reference, provide switches as recommended by the manufacturer of the connected equipment, and that reflect the latest technology. Provide and install updated and/or specific versions of firmware to accommodate the documented systems. Provide RTU Licenses as required to complete the functional requirements of the documented systems. This includes stacking options, media options, configuration software licensing, protocol options and applicable



EQUIPMENT ROOM & CONTROL ROOM NOTES 1. Coordinate with consultant and end-user for configuration of all control areas. Assist the end-user with OFE equipment and integrate with system components as required to complete the systems. 2. Contact consultant for coordination drawings related to room layouts.

3. Provide cable harnessing, j-hook systems or cable trays as required to secure cablign from conduit and raceway exits to 4. Coordinate final configuration of equipment space requirements with millwork and/or furniture contractor.

AV CABLING RACEWAYS & BOXES

1. The plans Indicate physical pull boxes, junctions and plug boxes 2. Refer to the AV Raceway plans or related electrical drawings. 3. Conduit and boxes provided and installed by others, UON.4. 4. Coordinate with Electrical Contractor in all cases, verify box type and mounting conditions 5. Do not use pull boxes as splice points, pull all cabling through box, UON.

recommendation for end-user use. Configure software UI as needed, coordinate with the end-user

6. Boxes may not be shown on single lines, refer to plans for locations, plans have precedence over single lines.

WIRELESS MICROPHONE & IEM SYSTEMS 1. Provide all rack kits, remote antennas, cabling, terminators, etc. required to support the systems as shown. 2. Provide rechargeable battery systems to accommodate each body pack or handheld device 3. Provide charding station to support the total number of battery-operated devices. 4. Provide remote antenna and related distribution to support the systems as shown, regardless if such systems are shown on 5. Provide LAN access for supported receivers and transmitters in all cases, configure software per manufacturer's

AV CABLING & TERMINATION NOTES

 All plenum wire shall meet applicable local codes Cable callouts shown on the single line drawings are for reference to the Basis of Design, UON. 3. All wire and cable shall be provided in accordance with the recommendations of the manufacturer for the connected equipment, UON

4. All exposed wire and cable shall be plenum rated per NEC and NFPA. Verify all cable types during submittal with the AV Consultant. Verify cable lengths with manufacturer of connected equipment for all cable types

Wire and cable for any device shall be supplied in accordance with the requirements of the device manufacturer 8. Wire and cable shall be installed in compliance with the National Electrical Code. 10. Wire, cable and signal conductors shall be new and unused. 11. All low level field cabling shall enter racks at punch points or directly soldered to equipment connectors. 12. Buss punch block ground points to single rack ground, see jack field detail.

3. Mechanically isolate all panel connectors from raceway system and finish plate 14. Mechanically isolate audio connector chassis from rack panel. 15. Mechanically isolate service entrance conduits from equipment rack.

16. Use #10AWG solid wire min. for all ground jumpers. 7. Isolate equipment rack from conduit, raceway and power distribution system. 18. Maintain proper twist ratio for all pairs (Category 6 patching and interconnect). 19. Terminate all pins and conductors (Category 6 patching and interconnect). 20. There shall be no ground loops, regardless of equipment configuration.

1. Use 3-wire grounded devices when possible. 22. Use only balanced audio terminations throughout system, U.O.N. Use only ratchet type crimp tools. 23. All wire and cable shall have a unique numering designator at each end of the physical media.24. Contractor shall supply the cable in accordance with the recommendations of the connected equipment manufacturer, the

cable types shown are for reference only. 25. Install and terminate cabling per AES, ANSI, IEC or BICSI standards, UON. 26. Contractor shall supply the optimum cable for the application 27. All cabling shall be subject to the circuit type. 28. All cabling shall be subject to environmental condition

29. All calbing shall be provided and installed for bandwidth requirements. 30. Wiring designators are shown to indicate the requirements and to denote circuiting. 31. Contractor is free to use their own numbering scheme. 32. Contractor shall document all wire numbers on their shop drawings and as-built drawings 33. Provide cable schedules for all cables UON. See specifications for additional requirements 34. Cable types are specified based on terminated end points. See single lines, provide as required to provide the system as

shown. Provide cables as recommended by the manufacturer of the terminated equipment, UON. 35. Provide cable as mandated by site conditions, including, but not limited to, conditions that require cable type to support return air plenums, fire ratings, adjacent cable paths that could impact performance, physical obstructions and federal, state and local building codes.

AUDIO CABLING

1. All low level field cabling shall enter rack at punch points or directly soldered to terminating connector at equipment or 2. Buss punch block ground points to single rack ground, see jack field detail. . If power supply includes ground to AC connector, do not terminate signal ground.

4. Mechanically isolate all panel connectors from raceway system and finish plate. 5. Mechanically isolate connector chassis from rack panel. Pin 1 shall not be at the same potential as connector chassis or 6. Mechanically isolate service entrance conduits from equipment rack

7. Use #10AWG solid wire min. for all ground jumpers. 8. There shall be no ground loops, regardless of equipment configuration 9. Use 3-wire grounded devices when possible. 10. Use only balanced audio terminations throughout system, U.O.N.

1. Use only ratchet type crimp tools. The presence of a non-ratchet crimp tool on the job site shall render all connections suspect. . Use only standard wiring and active devices, do not use crossover cables unless specifically noted on the drawings. Certify all Ethernet cable runs for Gigabit operation, min., per specifications 5. Certify all proprietary cable runs per the manufacturer's recommendation

6. All cabling transporting data shall be provided and installed in compliance with the connected endpoints 7. For this section, "connected endpoints" indicates manufacturer requirements of devices connected to data cabling plants.

WIRE NUMBERS

1. All wire and cable shall have a unique numering designator at each end of the physical media. 2. Contractor shall supply the cable in accordance with the recommendations of the connected equipment manufacturer, per AV best practice or AES, ANSI, IEC or BICSI standards. 3. Contractor shall supply the optimum cable for the application, considering the circuit type, environmental conditions. bandwidth requirements, termination type, cable construction and performance requirements 4. Wiring designators are shown to indicate the requirements and to denote circuiting. Contractor is free to use their own 5. Contractor shall document all wire numbers on their shop drawings and as-built drawings. Provide cable schedules for all 6. See specifications for additional requirements.

LOUDSPEAKERS

Provide cabling as reflected by single line drawings. Pull cable through pull box, do not splice or use panel connectors Amplifier circuit shall terminate directly to transducer UON. 4. Final adjustment of loudspeaker aiming and mouting configuration will be determined on-site during commissioning . Obtain aiming coordinates from consultant, UON. . Provide rigging hardware that supports adjustment of all loudspeakers for 360 degrees of adjustment. Provide lift, scaffolding and rigging kits required for loudspeaker mounting and adjustment. Ensure that all equipment is adjustable as to not impede loudsr Refer to single line drawings for component callouts, circuiting and related signal processing requirements 10. Attached to structure only, coordinate and/or obtain approval from Structural Engineer, see specifications 11. Equipment shall be held firmly in place with proper mounting hardware, suspension or rigging materials. 12. Equipment attached to any building structure, sub-structure or other load-bearing member shall be self-supporting 13. All mounting or rigging hardware shall be installed with a safety factor of at least three times the required load.

14. Provide 100% redundancy for all rigging attachment points, verify with Structural Engineer. 15. Provide bumpers, array brackets, dead-hang hardware, fasteners, safety equipment as required by the loudspeaker manufacturer. 14. Use manufacturer's rigging hardware if available.

SIGNAL FLOW

1. Single line drawings, reconciled with the plans, constitute the design. 2. Wire numbers are shown for reference only. 3. All cables shall be numbered. Contractor is free to use their own cable numbering scheme. 4. Single line drawings may not include minor supplemental items, accessories and cabling. 5. Provide all required items to support the systems as drawn as recommended by the manufacturer or per AV best practice. 6. Configure LAN switches to support the ports shown on the single lines and applicable port schedules. 7. Refer to legends, abbreviations and callouts for specific direction.

CONTROLS

1. Configure control server to accommodate all control ports shown, see control port schedule. Provide applicable wireless gateway or other interfaces as required for wireless controls. 3. Provide local power for all devices under control, control clients and dedicated control panels/touch panels. 4. Where possible, power control panels and devices interface and transport units with Power Over Ethernet (POE). 5. Provide additional power supply to support POE or power to end-points where required. 6. All control cabling shall be provided as recommended by the specified or approved control system manufacturer. 7. Provide UI clients for all systems, duplicate primary control interface for each client. 8. UI clients shall be provided for Mac OS, Windows, Linux, iOS and Android devices. Verify and coordinate with owner.

PROJECTION

1. Coordinate installation of projection screens with General Contractor. Provide rough-in backbox for screen motor UON. 3. Provide projection geometry as shown on the drawings, verify all parameters with the consultant. 4. Extend low voltage, serial, GPIO or LAN control circuits to AV Control System, coordinate with consultant. 5. Provide lens as required by the projection geometry shown. Verify with projector manufacturer. 6. Provide lens as required for the projection geometry shown on the plans and sections 7. Provide low-voltage controls for all projections screens, locate as directed by owner and/or consultant

SURFACE-MOUNTED DISPLAYS 1. Verify mounting heights for all displays with end-user, coordinate with consultant.

2. Ensure that raceway and power distribution components are properly roughed-in to support the display position Verify structural support for mounting systems with the General Contractor. Coordinate penetration of finished walls with General Contractor as necessary. Ensure that electronics components are mounted to facilitate proper cooling. Ensure that supplemental electronics, cabling and mounting systems are hidden from view. Verify that display positions are compliant with egress requirements, verify with architect

8. Provide and install surface-mount bracket in all cases. If bracket is not specifically specified, provide low-profile, non-swivel

type with ample space to accommodate all electronics mounted at the rear of the display LECTERN NOTES

1. Provide lectern with all accessories, components and hardware required to support the configuration shown. Configure lectern with the recommendations of the manufacturer and/or the Millwork Contractor . Coordinate final configuration, color, finish and operating height with the end-user and architect. 4. Provide cable access panels, equal to Extron Cable Cubby series, see single line drawings. 5. Follow conventions for fabrication of AV racks, see rack details. 6. Provide power distribution, master power switches for all lecterns, equal to Furman PL-8PLus or similar.

Provide shop drawings for all lecterns, including rack elevations, panel elevations and mounting details.

8. Provide connector panels for lectern cable harness, see single line drawings.



These drawings and their associated specifications, ideas, concepts, arrangements, designs and layouts are, and shall remain the property of the architect and consultant and no part thereof shall be copied. disclosed or distributed to any other party or used in connection with any work or project other than the specific work as noted on these drawings without the express written permission of the consultant. Visual contact with these drawings or specifications or any other intellectual properv associated with the project shall constitute acceptance of this policy. © Roland, Woolworth & Associates, LL

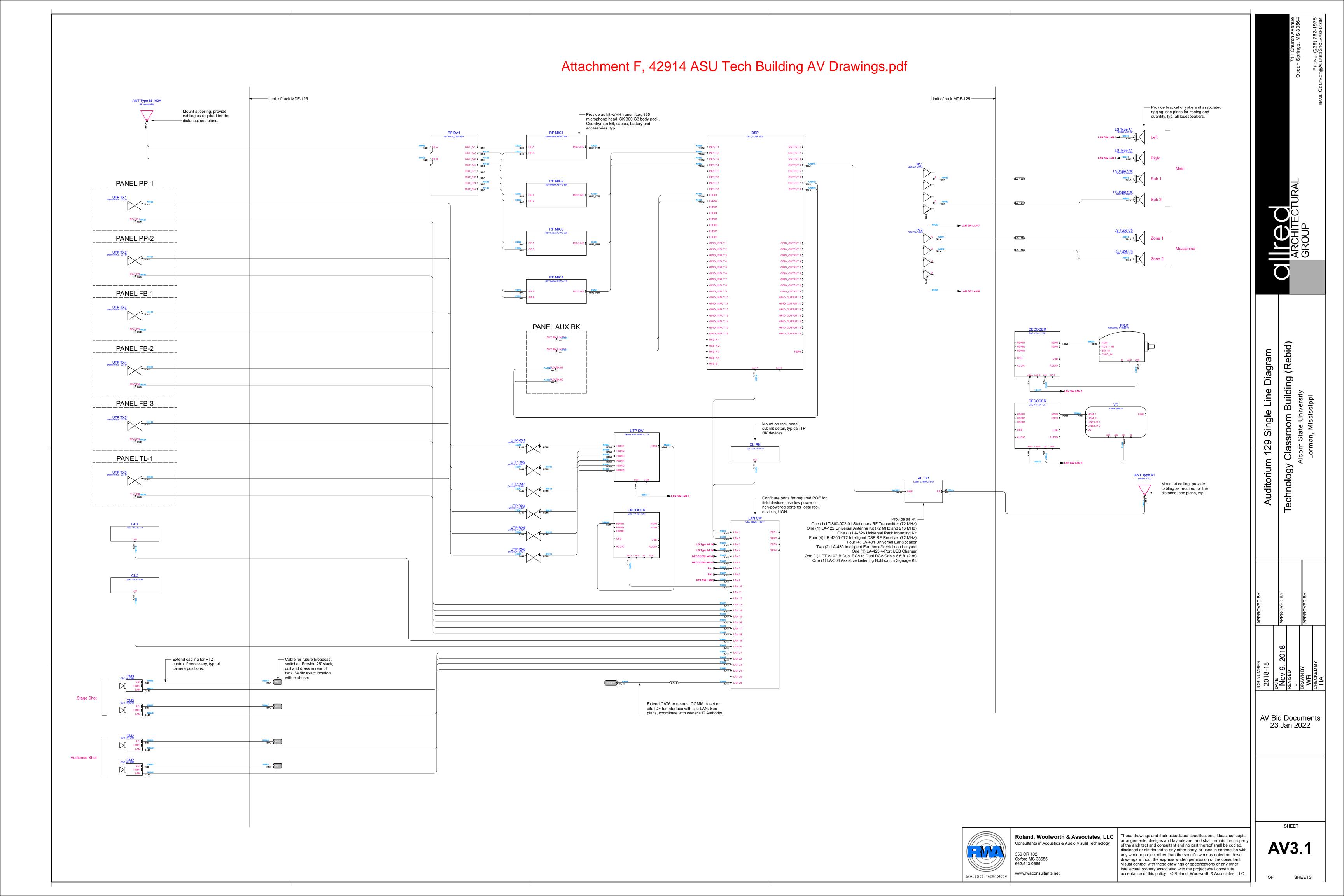
Roland, Woolworth & Associates, LLC Consultants in Acoustics & Audio Visual Technology 356 CR 102 Oxford MS 38655 662.513.0665 www.rwaconsultants.net coustics + technology

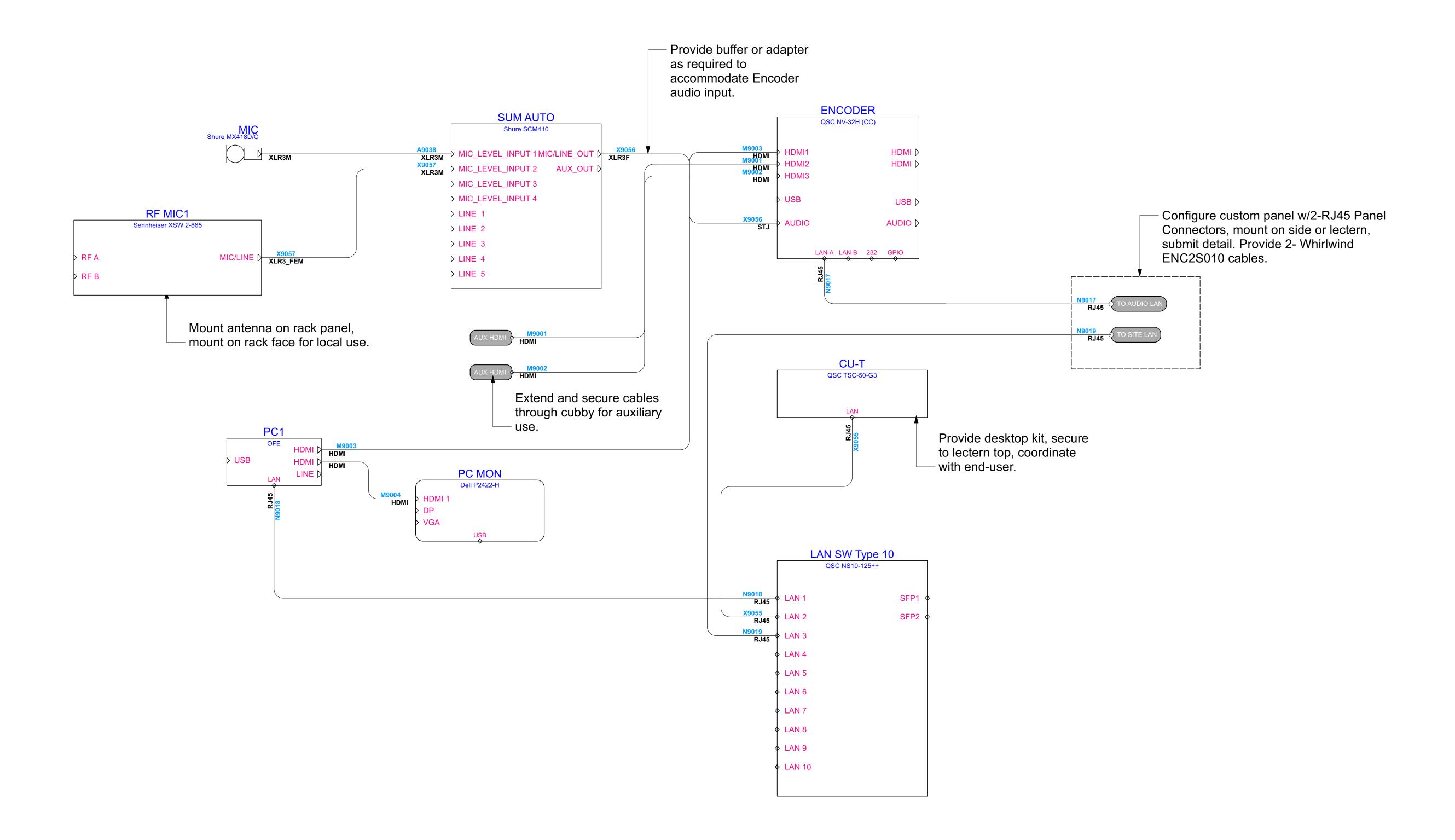
AV Bid Documents

23 Jan 2022

ਰ

SHEETS







Roland, Woolworth & Associates, LLC
Consultants in Acoustics & Audio Visual Technology

356 CR 102
Oxford MS 38655

These drawings and their associated specifications, ideas, concepts, arrangements, designs and layouts are, and shall remain the property of the architect and consultant and no part thereof shall be copied, disclosed or distributed to any other party, or used in connection with any work or project other than the specific work as noted on these drawings without the express written permission of the consultant. Visual contact with these drawings or specifications or any other intellectual propery associated with the project shall constitute acceptance of this policy. © Roland, Woolworth & Associates, LLC.

SHI

AV Bid Documents 23 Jan 2022

MIC_LEVEL_INPUT 3

MIC_LEVEL_INPUT 4

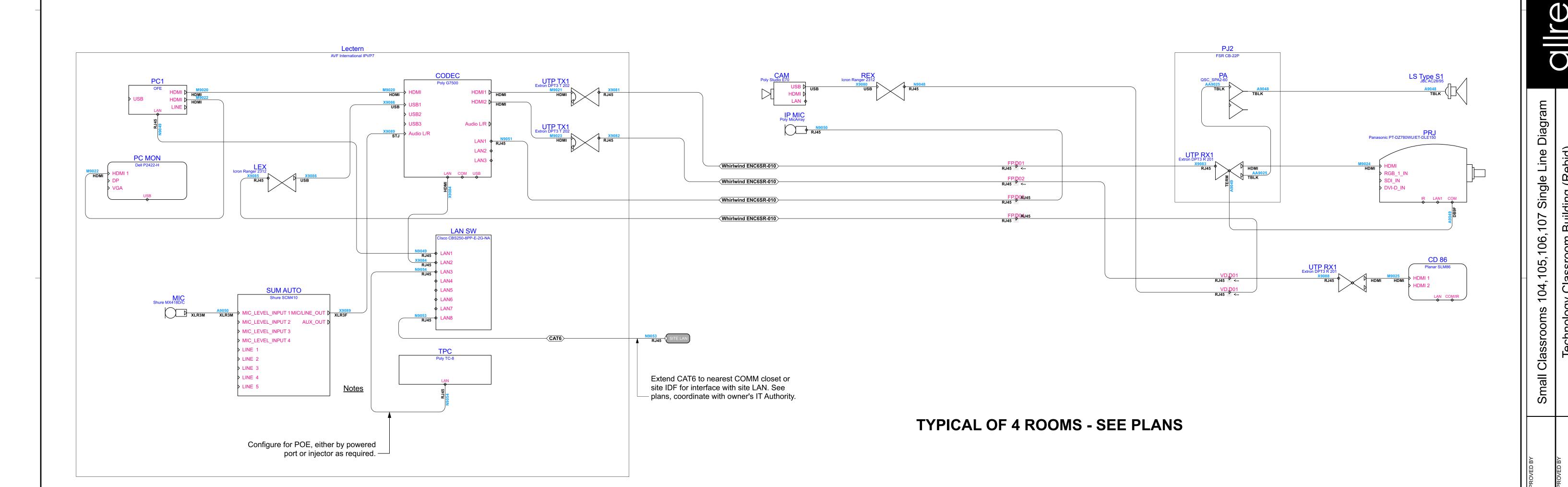
LINE 3 LINE 4

LINE 5



Roland, Woolworth & Associates, LLC Consultants in Acoustics & Audio Visual Technology 356 CR 102 Oxford MS 38655 662.513.0665

These drawings and their associated specifications, ideas, concepts, arrangements, designs and layouts are, and shall remain the property of the architect and consultant and no part thereof shall be copied, disclosed or distributed to any other party, or used in connection with any work or project other than the specific work as noted on these drawings without the express written permission of the consultant. Visual contact with these drawings or specifications or any other intellectual propery associated with the project shall constitute acceptance of this policy. © Roland, Woolworth & Associates, LLC.



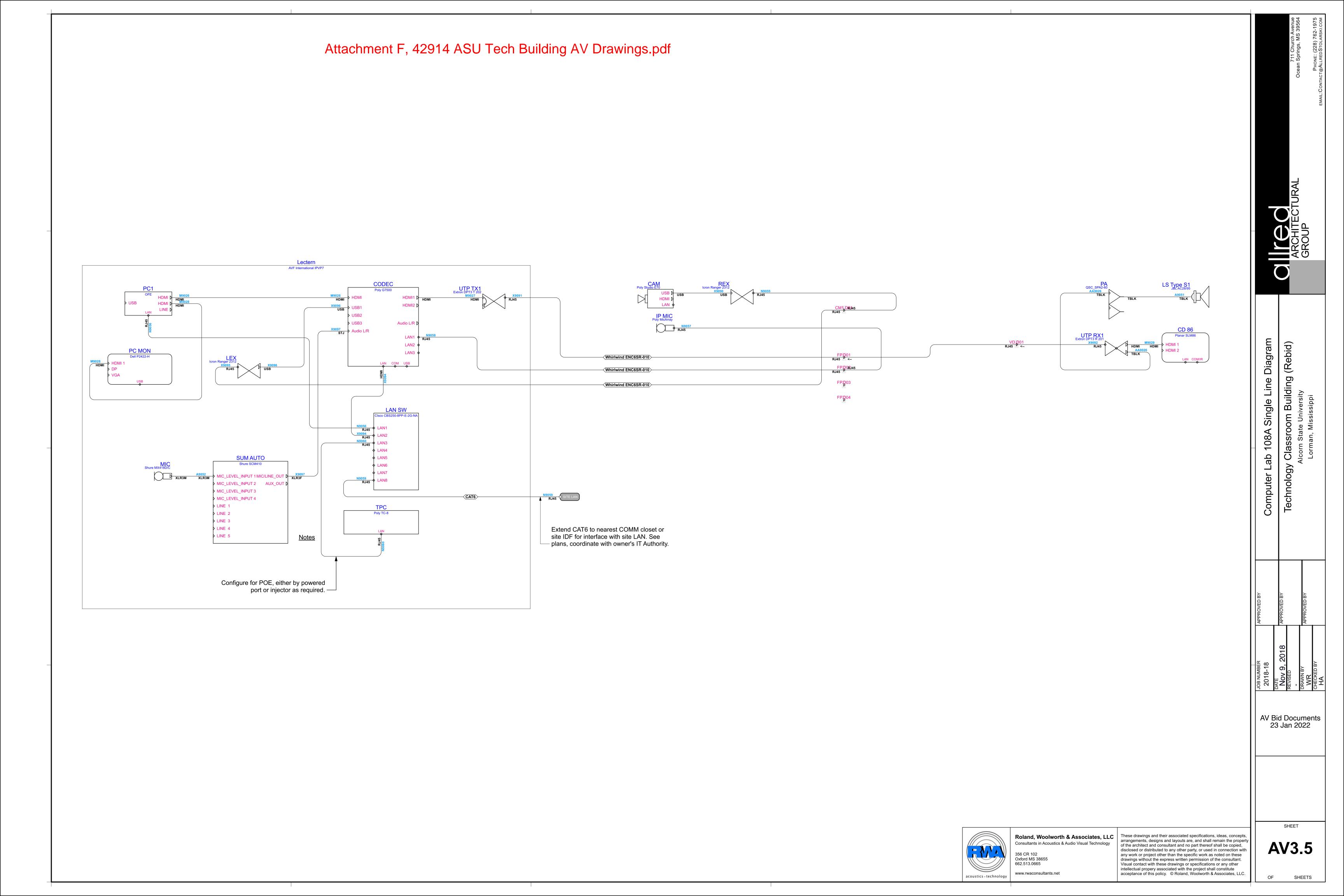
www.rwaconsultants.net

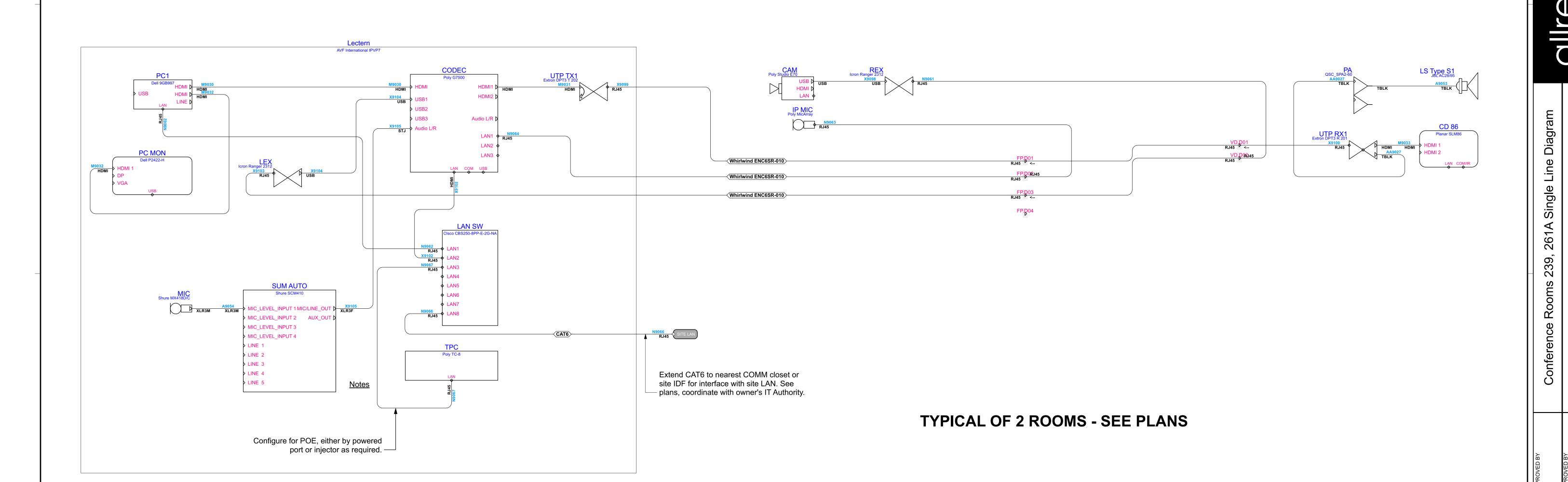
Roland, Woolworth & Associates, LLC Consultants in Acoustics & Audio Visual Technology 356 CR 102 Oxford MS 38655 662.513.0665

These drawings and their associated specifications, ideas, concepts, arrangements, designs and layouts are, and shall remain the property of the architect and consultant and no part thereof shall be copied, disclosed or distributed to any other party, or used in connection with any work or project other than the specific work as noted on these drawings without the express written permission of the consultant. Visual contact with these drawings or specifications or any other intellectual propery associated with the project shall constitute acceptance of this policy. © Roland, Woolworth & Associates, LLC.

OF SHEETS

AV Bid Documents 23 Jan 2022



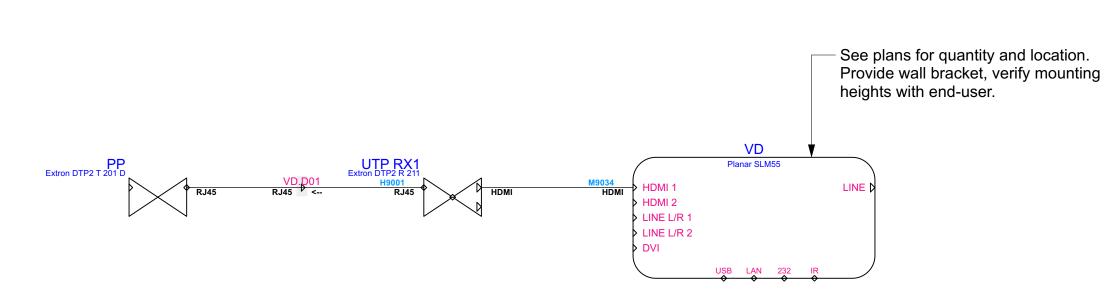




Roland, Woolworth & Associates, LLC Consultants in Acoustics & Audio Visual Technology 356 CR 102 Oxford MS 38655 662.513.0665

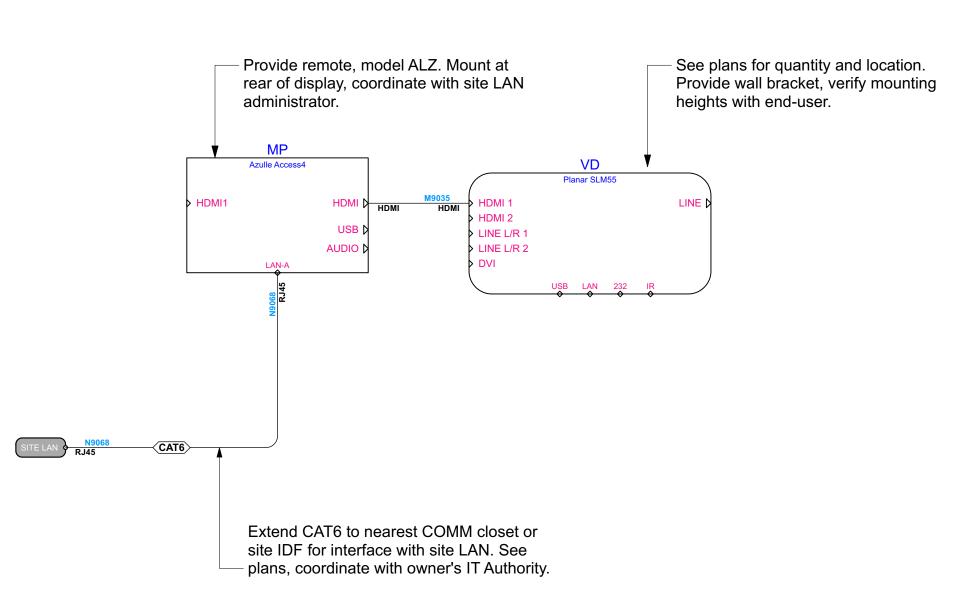
These drawings and their associated specifications, ideas, concepts, arrangements, designs and layouts are, and shall remain the property of the architect and consultant and no part thereof shall be copied, disclosed or distributed to any other party, or used in connection with any work or project other than the specific work as noted on these drawings without the express written permission of the consultant. Visual contact with these drawings or specifications or any other intellectual property associated with the project shall constitute. intellectual propery associated with the project shall constitute acceptance of this policy. © Roland, Woolworth & Associates, LLC

AV Bid Documents 23 Jan 2022



Interactive Learning/Dining 110 Single Line Diagram

Scale: Actual Size



SEE PLANS, TYPICAL OF EACH LOCATION.

DIgital Signage Single Line Diagram
Scale: Actual Size



Roland, Woolworth & Associates, LLC Consultants in Acoustics & Audio Visual Technology 356 CR 102 Oxford MS 38655 662.513.0665

www.rwaconsultants.net

acceptance of this policy. © Roland, Woolworth & Associates, LLC

These drawings and their associated specifications, ideas, concepts, arrangements, designs and layouts are, and shall remain the property of the architect and consultant and no part thereof shall be copied, disclosed or distributed to any other party, or used in connection with any work or project other than the specific work as noted on these drawings without the express written permission of the consultant. Visual contact with these drawings or specifications or any other intellectual propery associated with the project shall constitute

AV Bid Documents 23 Jan 2022

